

1. **Atmosphere:** The envelope of gases that surrounds Earth
2. **Biosphere:** All living things, whether in the air, in the oceans, or on and beneath the land surface.
3. **Continental Drift:** The hypothesis that the continents slowly move across Earth's surface
4. **Convection:** the slow circulation of subcrustal material, thought to be the mechanism by which tectonic plates are moved
5. **Convergent Boundary:** A plate boundary where two plates move toward each other
6. **Crust:** The layer of rock that forms Earth's outer surface
7. **Deep Ocean Trench:** A deep valley along the ocean floor beneath which oceanic crust slowly sinks toward the mantle
8. **Density:** a measure of the compactness of a substance, expressed as its mass per unit volume.
9. **Divergent Boundary:** A plate boundary where two plates move away from each other
10. **Earthquakes:** the shaking that results from the movement of rock beneath Earth's surface
11. **Explosivity:** a relative measure of the explosiveness of volcanic eruptions.
12. **Fault:** A break or crack in Earth's lithosphere along which the rocks move
13. **Fossil:** A trace of an ancient organism that has been preserved in rock
14. **Geosphere:** another name for the lithosphere; a rigid layer made up of the uppermost part of the mantle and the crust; the solid portion of the earth
15. **Global Positioning System (GPS):** a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites
16. **Hydrosphere:** the water on or surrounding the surface of the globe, including the water of the oceans and the water in the atmosphere.
17. **Lithosphere:** A rigid layer made up of the uppermost part of the mantle and the crust
18. **Magma:** hot molten rock, usually formed in the earth's upper mantle, some of which finds its way into the crust and onto the earth's surface, where it solidifies to form igneous rock
19. **Mantle:** The layer of hot, solid material between Earth's crust and core
20. **Mantle Convection:** A cycle of heating, rising, cooling, and sinking of plasticlike rock transferring heat from the core and the mantle
21. **Mid-ocean Ridge:** An undersea mountain chain where new ocean floor is produced
22. **Mountain belts:** These consist of several mountain ranges that run roughly parallel to each other. They typically are thousands of kilometers long and hundreds of kilometers across and parallel continental coastlines.
23. **Mountain ranges:** a series of adjoining mountains or of lines of mountains of similar origin
24. **Oceanic plates:** A section of the lithosphere that slowly moves over the asthenosphere, carrying pieces of oceanic crust
25. **Pangaea:** The name of the single landmass that broke apart 200 million years ago and gave rise to today's continents
26. **Plate:** A section of the lithosphere that slowly moves over the asthenosphere, carrying pieces of continental and oceanic crust
27. **Plate boundaries:** When plates move, they can interact in several ways. There are three types; plate can move toward each other or collide (convergent), pull apart (divergent) or slide alongside one another (transform).
28. **Plate Tectonics:** The theory that pieces of Earth's lithosphere are in constant motion, driven by convection currents in the mantle
29. **Pressure:** The force exerted on a surface divided by the total area over which the force is exerted
30. **Radioactive Decay:** The spontaneous transformation of an unstable atomic nucleus into a lighter one, in which radiation is released in the form of alpha particles, beta particles, gamma rays, and other particles. The rate of decay of radioactive substances such as carbon 14 or uranium is measured in terms of their half-life
31. **Sea-floor spreading:** The process by which molten material adds new oceanic crust to the ocean floor
32. **Sonar:** A device that determines the distance of an object under water by recording echoes of sound waves
33. **Subduction:** The process by which oceanic crust sinks beneath a deep-ocean trench and back into the mantle at a convergent plate boundary
34. **Tectonic Plates:** A section of the lithosphere that slowly moves over the asthenosphere, carrying pieces of continental and oceanic crust
35. **Thermal energy:** the total energy of motion in the particles of a substance
36. **Transform Boundary:** A plate boundary where two plates move past each other in opposite directions.
37. **Transform faults:** A strike-slip fault, common in mid-ocean ridge regions, in which there has been a sudden change in the form or direction of displacement.
38. **Upper Mantle:** the soft layer of the mantle on which the lithosphere floats; also known as the asthenosphere
39. **Volcanoes:** Cone-shaped hills or mountains formed when hot magma, solids, and gas erupt onto Earth's surface through a vent.